

REMARKS

Claims 1-22 are pending in the present application. In the Final Office Action mailed July 26, 2007, the Examiner rejected claims 1, 2, 8-12, 15, 16, 18-20, and 22 under 35 U.S.C. §102(a) as being anticipated by Warfield et al., “Nonlinear Registration and Template Driven Segmentation,” June 1999 (hereinafter Warfield et al.). The Examiner next rejected claims 3-7, 13, 14, 17, and 21 under 35 U.S.C. §103(a) as being unpatentable over Warfield et al., further in view of Hasegawa, “Fusion Imaging with CT/SPECT” Imaging Economics, November/December 2000 (hereinafter Hasegawa).

In response to Applicant's remarks filed July 10, 2007, that Examiner disagreed with Applicant that Warfield fails to teach or suggest aligning and warping a functional image with an anatomical image. *See Office Action*, 7/26/07, p. 9. The Examiner stated that “Warfield **teaches** and certainly **suggests** in par. 2 of page 1 that both anatomical (anatomical variability brain mapping scans) and functional (‘functional images’) images are the kinds of images used for alignment and subsequent warping.” *Id. (emphasis added)*. However, while Warfield may or may not teach or suggest anatomical and functional images, the mere use of these terms alone is not enough to satisfy anticipation under §102(a). The Examiner’s alternative positions (i.e., “teaches” and “suggests”) clearly indicates an uncertainty that does not arise to the level of a §102 rejection.

Claim 1 calls for, in part, aligning at least two anatomical fiducial markers determined on a functional image with corresponding points determined on an anatomical image. The second paragraph on page 1 of Warfield does not teach or describe aligning an anatomical image with a functional image. As explained above, the mere use of the terms “anatomical” and “functional” is not enough to satisfy anticipation under §102(a). That is, a §102(a) rejection cannot be supported by a mere word search.

The third paragraph on page 1, which the Examiner exclusively used in the formal rejection of claim 1, also fails to teach or describe aligning an anatomical image with a functional image. This paragraph of Warfield includes the authors’ definitions of “matching” and “warping” as they are used in the text. However, using the term “matching” to “refer to any process that determines correspondences between data sets” does not teach or describe determining correspondences between an anatomical image and a functional image.

On September 26, 2007, the undersigned telephoned the Examiner to discuss the rejections of the claims in light of Warfield. The undersigned appreciates the time that the Examiner allotted to discuss these matters. A discussion ensued regarding portions of the

Warfield reference made of record in rejecting the claims. The undersigned expressed an opinion of non-anticipation of the claims in light of such portions of the Warfield reference made of record. The Examiner referenced additional portions of the Warfield reference in support of anticipation of the claims, and the undersigned again expressed an opinion of non-anticipation of the claims in light of such additional portions. No agreement between the Examiner and the undersigned was reached.

Claims 11 calls for generation of a composite image of a functional image and the anatomical image such that the fiducial markers and the anatomical indicia are aligned and anatomical constraints are considered. Claim 18 calls for generation of an image with functional image data superimposed on anatomical image data that considers anatomical constraints. Claims 11 and 18 were analyzed and rejected for the reasons set forth regarding claim 1. Accordingly, as explained above, Warfield fails to anticipate claims 11 and 18 because it completely fails to teach or describe aligning an anatomical image with a functional image.

Combination of references

The Examiner stated that “applicant acknowledges that secondary reference (Hasegawa) was properly combined with primary reference (Warfield) informing the 103(a) rejection for claims (3 and 7).” *Id.* at 11. The Examiner asserted that such acknowledgment arises from a failure to raise issue with the Examiner’s use of Hasegawa without providing any legal basis for so concluding. Applicant respectfully disagrees.

Applicant’s traversal of the rejection of claim 1 includes traversing the Examiner’s conclusion that Warfield anticipates the subject matter of claim 1. Because the traversal of claim 1 also traverses the claims depending therefrom, it is inherent that a combination of any other reference with Warfield will likewise fail to anticipate such dependent claims and is therefore not properly combined under §103(a). Accordingly, Applicant asserts that Hasegawa was not properly combined with Warfield.

Official Notice

The Examiner stated that Applicant acquiesces that the subject matter in claims 4-6, 13-14, 17, and 21 is notoriously well-known and expected in the art. Applicant respectfully disagrees.

First, Applicants’ traversal of the rejection of the independent claims necessarily includes traversing the Examiner’s on the dependent claims. Applicants assert that the independent claims

are allowable, and thus, the dependent claims are allowable as well, at least through the chain of dependency.

Second, the Examiner's use of Official Notice is fundamentally and procedurally flawed and cannot be sustained regardless of any traversal. As stated in MPEP §2144.03, "It is never appropriate to rely solely on 'common knowledge' in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based." Furthermore, "general conclusions concerning what is 'basic knowledge' or 'common sense' to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection." *Id.*

The principal evidence upon which the rejections of claims 4-6, 13-14, 17, and 21 are based is the Examiner's use of Official Notice. Accordingly, as explained above, such reliance on Official Notice as the principal evidence for rejecting claims 4-6, 13-14, 17, and 21 was not and is never appropriate. As such, the rejections of claims 4-6, 13-14, 17, and 21 relying on Official Notice as the principal evidence are improper, and Applicant requests withdrawal thereof.

"Any rejection based on assertions that a fact is well-known or is common knowledge in the art without documentary evidence to support the examiner's conclusion should be judiciously applied. Furthermore, as noted by the court in *Ahlert*, any facts so noticed should be of notorious character and serve only to 'fill in the gaps' in an insubstantial manner which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based. See *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697; *Ahlert*, 424 F.2d at 1092, 165 USPQ 421." MPEP §2144.03(E).

In this case, the Examiner is not "filling gaps", but rejecting substantive claim elements that are clearly not insubstantial, without any evidence whatsoever. The Examiner provided no support for these assertions. "If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding." MPEP §2144.03(C); See 37 CFR §1.104(d)(2).

The record lacks concrete evidence and specific factual findings to support the Examiner's use of Official Notice. "It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known." *Id.* The subject matter of claims 4-6, 13-14, 17, and 21 is not capable of instant and unquestionable

demonstration as being well-known. Accordingly, the Examiner's obviousness rejections of claims 4-6, 13-14, 17, and 21 are not supported in the record. The Examiner must provide some form of evidence in the record to support use of Official Notice.

Conclusion

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-22.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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General Authorization and Extension of Time

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 07-0845. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 07-0845. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 07-0845. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 07-0845.

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